

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:
Marino Zerial
Marta Miaczynska

Serial No.: 10/564,435

Filed: January 10, 2006

For: APPL PROTEINS AS RAB5 EFFECTORS

Group Art Unit: Unknown

Examiner: Unknown

Atty. Dkt. No.: DEBE:061US

CERTIFICATE OF ELECTRONIC SUBMISSION

DATE OF SUBMISSION: August 16, 2006

INFORMATION DISCLOSURE STATEMENT

MS AMENDMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Sir:

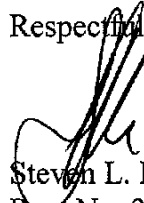
In compliance with the duty of disclosure under 37 C.F.R. § 1.56, it is respectfully requested that this Information Disclosure Statement be entered and the documents listed on attached Form PTO-1449 be considered by the Examiner and made of record. Copies of the listed documents required by 37 C.F.R. § 1.98(a)(2) are enclosed for the convenience of the Examiner.

In accordance with 37 C.F.R §§ 1.97(g), (h), this Information Disclosure Statement is not to be construed as a representation that a search has been made, and is not to be construed to be an admission that the information cited is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b).

The present Information Disclosure Statement is being filed prior to the receipt of a first Official Action reflecting an examination on the merits, and hence is believed to be timely filed in accordance with 37 C.F.R § 1.97(b). No fees are believed to be due in connection with the filing of this Information Disclosure Statement, however, should any fees under 37 C.F.R. §§ 1.16 to 1.21 be deemed necessary for any reason relating to these materials, the Commissioner is authorized to deduct the appropriate fees from Fulbright & Jaworski Deposit Account No.: 50-1212/DEBE:061US.

Applicants respectfully request that the listed documents be made of record in the present case.

Respectfully submitted,



Steven L. Highlander
Reg. No. 37,642
Attorney for Applicants

FULBRIGHT & JAWORSKI L.L.P.
600 Congress Avenue, Suite 2400
Austin, Texas 78701
(512) 474-5201

Date: August 16, 2006

Form PTO-1449 (modified)	Atty. Docket No. DEBE:061US	Serial No. 10/564,435
List of Patents and Publications for Applicant's INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	Applicant Marino Zerial Marta Miaczynska	
	Filing Date: January 10, 2006	Group: Unknown
U.S. Patent Documents <i>See Page 1</i>	Foreign Patent Documents <i>See Page 1</i>	Other Art <i>See Page 1</i>

U.S. Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date of App.

Foreign Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Country	Class	Sub Class	Translation Yes/No
	B1	EP 1088898	04/04/01	Europe			English
	B2	WO 01/20022	03/22/01	WIPO			English
	B3	WO 2005/005475	01/2005	WIPO			English

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C1	Ahringer, "NuRD and SIN3 histone deacetylase complexes in development," <i>Trends Genet</i> , 16:351-6, 2000.
	C2	Altschul <i>et al.</i> , "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs," <i>Nucleic Acids Res</i> , 25:3389-402, 1997.
	C3	Barbieri <i>et al.</i> , "Epidermal growth factor and membrane trafficking. EGF receptor activation of endocytosis requires Rab5a," <i>J Cell Biol</i> , 151:539-50, 2000.
	C4	Bucci <i>et al.</i> , "The small GTPase Rab5 functions as a regulatory factor in the early endocytic pathway," <i>Cell</i> , 70:715-728, 1992.
	C5	Cavalli <i>et al.</i> , "The stress-induced MAP kinase p38 regulates endocytic trafficking via the GDI:Rab5 complex," <i>Mol Cell</i> , 7:421-32, 2001.
	C6	Chang and Karin, "Mammalian MAP kinase signalling cascades," <i>Nature</i> , 410:37-40, 2001.
	C7	Christoforidis <i>et al.</i> , "Phosphatidylinositol-3-OH kinases are Rab5 effectors," <i>Nat Cell Biol</i> , 1:249-252, 1999.
	C8	Christoforidis <i>et al.</i> , "The Rab5 effector EEA1 is a core component of endosome docking," <i>Nature</i> , 397:621-625, 1999.

25658945.1

EXAMINER:

DATE CONSIDERED:

EXAMINER: INITIAL IF REFERENCE CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

Form PTO-1449 (modified)		Atty. Docket No. DEBE:061US	Serial No. 10/564,435
List of Patents and Publications for Applicant's INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant Marino Zerial Marta Miaczynska	
		Filing Date: January 10, 2006	Group: Unknown
U.S. Patent Documents <i>See Page 1</i>	Foreign Patent Documents <i>See Page 1</i>	Other Art <i>See Page 1</i>	

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C9	De Renzis <i>et al.</i> , "Divalent rab effectors regulate the sub-compartmental organization and sorting of early endosomes," <i>Nature Cell Biology</i> , 4:124-133, 2002.
	C10	Di Fiore <i>et al.</i> , "Endocytosis and signaling: an inseparable partnership," <i>Cell</i> , 106:1-4, 2001.
	C11	Dowler <i>et al.</i> , "Identification of pleckstrin-homology-domain-containing proteins with novel phosphoinositide-binding specificities," <i>Biochem J</i> , 351:19-31, 2000.
	C12	Dumont <i>et al.</i> , "Cross signaling, cell specificity, and physiology," <i>Am J Physiol Cell Physiol</i> , 283:C2-28, 2002.
	C13	Elbashir <i>et al.</i> , "Duplexes of 21-nucleotide RNAs mediate RNA interference in cultured mammalian cells," <i>Nature</i> , 411:494-8, 2001.
	C14	Elliott <i>et al.</i> , "The c-Myc-interacting adaptor protein Bin1 activates a caspase-independent cell death program," <i>Oncogene</i> , 19:4669-84, 2000.
	C15	Feng <i>et al.</i> , "The MeCP1 complex represses transcription through preferential binding, remodeling, and deacetylating methylated nucleosomes," <i>Genes Dev</i> , 15:827-32, 2001.
	C16	Fischer <i>et al.</i> , "CAFASP-1: critical assessment of fully automated structure prediction methods," <i>Proteins</i> , Suppl. 3:209-17, 1999.
	C17	Forcet <i>et al.</i> , "The dependence receptor DCC (deleted in colorectal cancer) defines an alternative mechanism for caspase activation," <i>Proc Natl Acad Sci U S A</i> , 98:3416-21, 2001.
	C18	Giaccia <i>et al.</i> , "The complexity of p53 modulation: emerging patterns from divergent signals," <i>Genes Dev</i> , 12:2973-83, 1998.
	C19	Grimes <i>et al.</i> , "Endocytosis of activated TrkA: evidence that nerve growth factor induces formation of signaling endosomes," <i>J Neurosci</i> , 16:7950-64, 1996.
	C20	Gronroos <i>et al.</i> , "Control of Smad7 stability by competition between acetylation and ubiquitination," <i>Mol Cell</i> , 10:483-93, 2002.
	C21	Habermann, "The bar-domain family of proteins: a case of bending and binding?" <i>EMBO Reports</i> , 5:250-255, 2004.
	C22	Horiuchi <i>et al.</i> , "A novel Rab5 GDP/GTP exchange factor complexed to rabaptin-5 links nucleotide exchange to effector recruitment and function," <i>Cell</i> , 90:1149-1159, 1997.

25658945.1

EXAMINER:**DATE CONSIDERED:**

EXAMINER: INITIAL IF REFERENCE CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

Form PTO-1449 (modified)		Atty. Docket No. DEBE:061US	Serial No. 10/564,435
List of Patents and Publications for Applicant's INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant Marino Zerial Marta Miaczynska	
		Filing Date: January 10, 2006	Group: Unknown
U.S. Patent Documents <i>See Page 1</i>	Foreign Patent Documents <i>See Page 1</i>	Other Art <i>See Page 1</i>	

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C23	Humphrey <i>et al.</i> , "Stable histone deacetylase complexes distinguished by the presence of SANT domain proteins CoREST/kiaa0071 and Mta-L1," <i>J Biol Chem</i> , 276:6817-24, 2001.
	C24	Itoh <i>et al.</i> , "The FYVE domain in Smad anchor fo receptor activation (SARA) is sufficient for localization of SARA in early endosomes and regulates TGF-beta/Smad signalling," <i>Genes Cells</i> , 7:321-31, 2002.
	C25	Jäckle <i>et al.</i> , "Trafficking of the epidermal growth factor receptor and transferrin in three hepatocytic endosomal fractions," <i>J Biol Chem</i> , 266:1396-1402, 1991.
	C26	Johannessen <i>et al.</i> , "Epidermal growth factor receptor efficiently activates mitogen-activated protein kinase in HeLa cells and Hep2 cells conditionally defective in clathrin-dependent endocytosis," <i>Exp Cell Res</i> , 260:136-45, 2000.
	C27	Kao <i>et al.</i> , "Expression of a dominant interfering dynamin mutant in 3T3L1 adipocytes inhibits GLUT4 endocytosis without affecting insulin signaling," <i>J Biol Chem</i> , 273:25450-7, 1998.
	C28	Keino-Masu <i>et al.</i> , "Deleted in colorectal cancer (DCC) encodes a netrin receptor," <i>Cell</i> , 87:175-85, 1996.
	C29	Komada <i>et al.</i> , "Growth factor induced tyrosine phosphorylation of Hrs, a novel 115-kilodalton protein with a structurally conserved putative zinc finger domain," <i>Mol Cell Biol</i> , 15:6213-21, 1995.
	C30	Lanzetti, <i>et al.</i> , "The Eps8 protein coordinates EGF receptor signaling through Rac and trafficking through Rab5," <i>Nature</i> , 408:374-7, 2000.
	C31	Lippe <i>et al.</i> , "Functional synergy between Rab5 effector rabaptin-5 and exchange factor rabex-5 when physically associated in a complex," <i>Mol Biol Cell</i> , 12:2219-28, 2001.
	C32	Liu <i>et al.</i> , "Mediation of the DCC apoptotic signal by DIP13 alpha," <i>J Biol Chem</i> , 277:26281-5, 2002.
	C33	Lu <i>et al.</i> , "lin-35 and lin-53, two genes that antagonize a C. elegans Ras pathway, encode proteins similar to Rb and its binding protein RbAp48," <i>Cell</i> , 95:981-91, 1998.
	C34	Lu <i>et al.</i> , "Transforming growth factor beta activates Smad2 in the absence of receptor endocytosis," <i>J. Biol Chem</i> , 277:29363-8, 2002.

25658945.1

EXAMINER:**DATE CONSIDERED:**

EXAMINER: INITIAL IF REFERENCE CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

Form PTO-1449 (modified)		Atty. Docket No. DEBE:061US	Serial No. 10/564,435
List of Patents and Publications for Applicant's INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant Marino Zerial Marta Miaczynska	
		Filing Date: January 10, 2006	Group: Unknown
U.S. Patent Documents <i>See Page 1</i>	Foreign Patent Documents <i>See Page 1</i>	Other Art <i>See Page 1</i>	

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C35	Luetterforst <i>et al.</i> , "Molecular characterization of caveolin association with the golgi complex: identification of a cis-golgi targeting domain in the caveolin molecule," <i>J Cell Biol</i> , 145:1443-59, 1999.
	C36	Luo <i>et al.</i> , "Deacetylation of p53 modulates its effect on cell growth and apoptosis," <i>Nature</i> , 408:377-81, 2000.
	C37	Martinu <i>et al.</i> , "Endocytosis of epidermal growth factor receptor regulated by Grb2-mediated recruitment of the Rab5 GAP RN-tre," <i>J Biol Chem</i> , 277:50996-51002, 2002.
	C38	McPherson <i>et al.</i> , "Signaling on the endocytic pathway," <i>Traffic</i> 2:375-84, 2001.
	C39	Miaczynska <i>et al.</i> , "APPL proteins link rab5 to nuclear signal transduction via an endosomal compartment," <i>Cell</i> , 116:445-456, 2004.
	C40	Miaczynska <i>et al.</i> , "Not just a sink: endosomes in control of signal transduction," <i>Current Opinion in Cell Biology</i> , 16:400-406, 2004.
	C41	Miaczynska <i>et al.</i> , "Mosaic organization of the endocytic pathway," <i>Exp Cell Res</i> , 272:8-14, 2002.
	C42	Mitsuuchi <i>et al.</i> , "Identification of a chromosome 3p14.3-21.1 gene, APPL, encoding an adaptor molecule that interacts with the oncoprotein-serine/threonine kinase AKT2," <i>Oncogene</i> , 18:4891-8, 1999.
	C43	Nakai and Horton, "PSORT: a program for detecting sorting signals in proteins and predicting their subcellular localization," <i>Trends Biochem Sci</i> , 24:34-35, 1999.
	C44	Nielsen <i>et al.</i> , "Rabenosyn-5, a novel Rab5 effector, is complexed with hVPS45 and recruited to endosomes through a FYVE finger domain," <i>J Cell Biol</i> , 151:601-12, 2000.
	C45	Panopoulou <i>et al.</i> , "Early endosomal regulation of Smad-dependent signaling in endothelial cells," <i>J Biol Chem</i> , 277:18046-52, 2002.
	C46	Patki <i>et al.</i> , "Identification of an early endosomal protein regulated by phosphatidylinositol 3-kinase," <i>Proc Natl Acad Sci U S A</i> , 94:7326-30, 1997.
	C47	Pelkmans <i>et al.</i> , "Caveolar endocytosis of simian virus 40 reveals a new two-step vesicular-transport pathway to the ER," <i>Nat Cell Biol</i> , 3:473-83, 2001.
	C48	Raiborg <i>et al.</i> , "FYVE and coiled-coil domains determine the specific localisation of Hrs to early endosomes," <i>J Cell Sci</i> , 114:2255-63, 2001.

25658945.1

EXAMINER:

DATE CONSIDERED:

EXAMINER: INITIAL IF REFERENCE CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

Form PTO-1449 (modified)		Atty. Docket No. DEBE:061US	Serial No. 10/564,435
List of Patents and Publications for Applicant's INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant Marino Zerial Marta Miaczynska	
		Filing Date: January 10, 2006	Group: Unknown
U.S. Patent Documents <i>See Page 1</i>	Foreign Patent Documents <i>See Page 1</i>	Other Art <i>See Page 1</i>	

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C49	Rubino <i>et al.</i> , "Selective membrane recruitment of EEA1 suggests a role in directional transport of clathrin-coated vesicles to early endosomes," <i>J Biol Chem</i> , 275:3745-8, 2000.
	C50	Rybin <i>et al.</i> , "GTPase activity of Rab5 acts as a timer for endocytic membrane fusion," <i>Nature</i> , 383:266-269, 1996.
	C51	Sabharanjak <i>et al.</i> , "GPI-anchored proteins are delivered to recycling endosomes via a distinct cdc42-regulated, clathrin-independent pinocytic pathway," <i>Dev Cell</i> , 2:411-23, 2002.
	C52	Sakamuro <i>et al.</i> , "BIN1 is a novel MYC-interacting protein with features of a tumour suppressor," <i>Nat Genet</i> , 14:69-77, 1996.
	C53	Schultz <i>et al.</i> , "SMART, a simple modular architecture research tool: identification of signaling domains," <i>Proc Natl Acad Sci U S A</i> , 95:5857-64, 1998.
	C54	Shevchenko <i>et al.</i> , "Mass spectrometric sequencing of proteins silver-stained polyacrylamide gels," <i>Anal Chem</i> , 68:850-858, 1996.
	C55	Shevchenko <i>et al.</i> , "Rapid 'de novo' peptide sequencing by a combination of nanoelectrospray, isotopic labeling and a quadrupole/time-of flight mass spectrometer," <i>Rapid Comm Mass Spectrom</i> , 11:1015-1024, 1997.
	C56	Simonsen <i>et al.</i> , "EEA1 links phosphatidylinositol 3-kinase function to Rab5 regulation of endosome fusion," <i>Nature</i> , 394:494-498, 1998.
	C57	Sonnichsen <i>et al.</i> , "Distinct membrane domains on endosomes in the recycling pathway visualized by multicolor imaging of Rab4, Rab5, and Rab11," <i>J Cell Biol</i> , 149:901-14, 2000.
	C58	Sorkin <i>et al.</i> , "Signal transduction and endocytosis: close encounters of many kinds," <i>Nat Rev Mol Cell Biol</i> , 3:600-14, 2002.
	C59	Stenmark <i>et al.</i> , "Inhibition of Rab5 GTPase activity stimulates membrane fusion in endocytosis," <i>EMBO J</i> , 13:1287-1296, 1994.
	C60	Tall <i>et al.</i> , "Ras-activated endocytosis is mediated by the Rab5 guanine nucleotide exchange activity of RIN1," <i>Dev Cell</i> , 1:73-82, 2001.
	C61	Tarricone <i>et al.</i> , "The structural basis of Arfaptin-mediated cross-talk between Rac and Arf signalling pathways," <i>Nature</i> , 411:215-9, 2001.
	C62	Taunton <i>et al.</i> , "A mammalian histone deacetylase related to the yeast transcriptional regulator Rpd3p," <i>Science</i> , 272:408-11, 1996.

25658945.1

EXAMINER:**DATE CONSIDERED:**

EXAMINER: INITIAL IF REFERENCE CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

Form PTO-1449 (modified)		Atty. Docket No. DEBE:061US	Serial No. 10/564,435
List of Patents and Publications for Applicant's INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		Applicant Marino Zerial Marta Miaczynska	
		Filing Date: January 10, 2006	Group: Unknown
U.S. Patent Documents <i>See Page 1</i>	Foreign Patent Documents <i>See Page 1</i>	Other Art <i>See Page 1</i>	

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C63	Teis <i>et al.</i> , "Localization of the MP1-MAPK scaffold complex to endosomes is mediated by p14 and required for signal transduction," <i>Dev Cell</i> , 3:803-14, 2002.
	C64	Trischler <i>et al.</i> , "Biochemical analysis of distinct Rab5- and Rab11- positive endosomes along the transferrin pathway," <i>J Cell Sci</i> , 112:4773-83, 1999.
	C65	Tsukazaki <i>et al.</i> , "SARA, a FYVE domain protein that recruits Smad2 to the TGFbeta receptor," <i>Cell</i> , 95:779-91, 1998.
	C66	Unhavaithaya <i>et al.</i> , "MEP-1 and a Homolog of the NURD complex component Mi-2 act together to maintain germline-soma distinctions in <i>C.elegans</i> ," <i>Cell</i> , 111:991-1002, 2002.
	C67	Van Aelst <i>et al.</i> , "Identification of a novel Rac1-interacting protein involved in membrane ruffling," <i>EMBO J</i> , 15:3778-86, 1996.
	C68	Vieira <i>et al.</i> , "Control of EGF receptor signaling by clathrin-mediated endocytosis," <i>Science</i> , 274:2086-9, 1996.
	C69	Vousden, K.H., "p53: death star," <i>Cell</i> , 103:691-4, 2000.
	C70	Yang <i>et al.</i> , "APPL supresses androgen receptor transactivatyon via potentiating Akt activity," <i>The Journal of Biological Chemistry</i> , 278(19):16820-16827, 2003.
	C71	Yarden, "The EGFR family and its ligands in human cancer. signalling mechanisms and therapeutic opportunities," <i>Eur J Cancer</i> , 37(Suppl 4):S3-8, 2001.
	C72	Yoshida <i>et al.</i> , "Trichostatin A and trapoxin: novel chemical probes for the role of histone acetylation in chromatin structure and function," <i>Bioessays</i> , 17:423-30, 1995.
	C73	Zerial and McBride, "Rab proteins as membrane organizers," <i>Nat Rev Mol Cell Biol</i> , 2:107-17, 2001.

25658945.1

EXAMINER:

DATE CONSIDERED:

EXAMINER: INITIAL IF REFERENCE CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED. INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.